



# ESMINT

European Society of  
Minimally Invasive Neurological Therapy

## **PRESS RELEASE 31 October 2023**

### **ESMINT – Essential partner in EU funded research: Study shows benefit of catheter-based stroke therapy even in patients with already extensive brain damage**

The question for the TENSION study was: Is catheter-based removal of blood clots (thrombectomy) effective even in major strokes? The study had to be stopped early because of an overwhelmingly positive effect of thrombectomy. The rate of patients with moderate disability 90 days after therapy was 31% with catheter-based therapy and only 13% with the standard therapy alone. At the same time, the rate of patients with very poor outcome or death decreased substantially from 74% to 49%. The results were published in the highly respected scientific journal "The Lancet" on October 11, 2023.

Patients were randomly divided into two groups: While the first group received conventional drug therapy, in the second group the clot is additionally removed by thrombectomy. After 90 days, the degree of the patient's disability due to the stroke is recorded based on a scale customary in stroke treatment. The clinical study was coordinated from Heidelberg University Hospital and the TENSION research project is managed by the UKE.

Until recently, this thrombectomy has only been used regularly if a stroke had not yet caused major brain damage. The TENSION research project in collaboration with scientists from ESMINT was to conduct a clinical study to show whether patients affected by severe strokes can also benefit from the procedure. The study enrolled 253 patients from 13 sites in eight countries in Europe and Canada. It was supported by the European Union with 6.5 million Euro.

In a so-called thrombectomy, blood clots are removed from the arteries of the brain with the help of a catheter in the event of a stroke to restore blood flow to the brain. A large part of strokes in Europe is caused by a blood clot (thrombus) that closes a blood vessel in the brain so that parts of the brain can no longer be supplied with oxygen. Previously, if only a small amount of brain tissue was damaged, doctors could insert a catheter into the arteries of the



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brain from the groin under X-ray control and remove the clot with special instruments. It was unclear whether this treatment would also help patients with major brain attacks.

"With TENSION we confirmed that patients with already extensive cerebral infarcts also benefit from a thrombectomy." says Prof. Dr. Jens Fiehler, Director of the Department of Neuroradiology in the University Hospital Hamburg-Eppendorf, Hamburg, Germany and former ESMINT president. "More than 80% of the study patients were enrolled based on a simple computed tomography (CT) that is available in most hospitals in Europe. The positive result of TENSION study further increases the patient access to thrombectomy."

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The European Society of Minimally Invasive Neurological Therapy (ESMINT) is an interdisciplinary society addressing medical practitioners and scientists working in the field of neuroradiology, interventional neuroradiology, neurointerventional surgery, endovascular neurosurgery and vascular neurology. ESMINT encourages and supports medical practitioners and scientists of these fields working to develop and improve minimally invasive methods for the interventional treatment of neurological diseases. ESMINT promotes the safe application of such techniques and their practice by suitably trained and competent practitioners throughout Europe. ESMINT encourages the setting of international standards for practice and research and encourages their use and appropriate implementation.

**ESMINT is leader of Work Package 7 (WP7): Dissemination, transfer, scientific data pooling and sharing. WP7 will ensure timely and wide dissemination of the results of the TENSION trial within the scientific community and the public, to ensure rapid transfer into clinical practice.**